DOCUMENT RESUME

ED 074 670 EC 051 590

TITLE	Management System for EMR Work Study Program.
INSTITUTION	Columbia County Board of Public Instruction, Lake City, Fla. Exceptional Child Education Dept.
PUB DATE	73
NOTE	49p.
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	*Behavioral Objectives; *Computer Programs; Course Objectives; *Educable Mentally Handicapped; Evaluation; *Exceptional Child Education; Home Economics; Information Systems; Mentally Handicapped; Rating Scales; Vocational Education; *Work Study Programs
IDENTIFIERS	Daily Living Skills

ABSTRACT

A computerized information management system involving the specification of objectives, the coding of teacher evaluations of students, and a variety of possible outputs has been used in a work study program for educable mentally retarded adolescents. Instructional objectives are specified and coded by number and category. Evaluation is by means of a six-point rating scale. Four types of reports can be generated by the system such as reports indicating student deficiencies and gains. The major portion of the document consists of a listing of nine to 23 objectives for each of the following instructional areas: applying for a job (prevocation skills), child care, household cleaning, motel maid, wardrobe care, food preparation, care of the invalid and infirm, service station attendant, mechanics assistant-small engine maintenance, communication skills, reading skills, numerical skills, social skills, banking and insurance, personal health and grooming, personal leisure time activities, personal swimming skills, cocking for boys, repairing household appliances, family living-consumer education, general citizenship, and voting, taxes, and social security. Sample computer reports, data cards, and teacher evaluation forms are included. (DB)

ED 074670

Management System for E M R

Work Study Program

Columbia High School

Lake City, Florida

EC 051 590 E

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EDUCATION & WELFARE
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COMPUTER BASED INFORMATION MANAGEMENT SYSTEM

To facilitate the accumulation and sorting of the data collected in the Lake City EMR project, a file system has been developed utilizing the CDC/6400 computer at Florida State University. The file system available on the CDC/6400 system is a Multiple Access and Retrieval System (MARS). To explain how the Data Management System is integrated into the EMR Project, a narrative description of the complete process necessary to input data into and retrieve data from the System follows.

Specification of Objectives. To allow for consistent and concise interpretation of the goals and objectives of the EMR Project, specific objectives must be stated and adhered to throughout the year. This does not mean to say that additional objectives could not be added throughout the year. To build the file on the computer which will have sensible data to be analyzed at the end of any time slice, the objective number that one is looking at must represent the same objective at the beginning of the year as it represents at the end of the year. Otherwise, the data included in that particular file will be meaningless.

As objectives were specified by the Lake City EMR Project staff, the job of coding these objectives by number was reasonably easy. The list of objectives and their codes can be found in Appendix A.

Coding of Teacher Evaluations of EMR Students. Obviously one evaluation of a student's performance for any one objective for the year would not be enough. Therefore, it was decided to allow for at least a pre-instruction evaluation and a post-instruction evaluation. Positions in the file are available for three other within-instruction evaluations if a teacher desires to do so. As these evaluation points must be coded

into the files, a two-digit identifier was simply added to the code for the objective to indicate which evaluation period was to be entered into the file. For example, objective coded A101 which is "can gather information needed to get job," has five subcodes below it. A10101 indicates the pre-instruction evaluation of the student for that objective. A10102 indicates a second evaluation. A10103, A10104 are two other intermediate evaluation points, and A10105 indicates the final after-instruction evaluation of this student for objective A101.

The interpretation of pre-instruction and post-instruction evaluations is up to the teacher. The pre-instruction evaluation may mean the pretest during the first month of the school year or it could mean, if the Lake City project staff so decides, the pre-test or pre-evaluation given to the student immediately prior to instruction on that specific objective. The post-instruction evaluation point could mean the final evaluation of the student at the end of the year, or it could mean simply the unit test given at the end of a instructional sequence for a specific objective. If the EMR project staff sees no inconsistency in this method of file handling, then they may be the ones to decide what they mean as to pre-instruction and post-instruction. On the other hand, to be consistent across objectives and across teachers, it might be worthwhile to specify the meaning of pre-instruction and post-instruction.

Getting data ready to input in to the file system. The evaluation forms such as that one used for Custodial Work and Building Maintenance is constructed so as to be easily readable by a keypunch operator. The keypunch operator transfers information from the actual evaluation form, used by the teacher into punched cards which are then readable by the

computer. The column marked pre-test is taken to be that evaluation which is designated by the file as pre-instruction evaluation. That evaluation column marked posttest is taken to be the post-instruction evaluation point. The code that is used to input data into the computer files is as follows:

0 - No ability

1 - Poor

2 - Fair

3 - Good

4 - Excellent

5 - Outstanding

A six-point scale was thought to be acceptable because of the following reasons. (1) By having gradations of competency, a teacher is able to see steady improvement in the student's performance, whereas with a dichotomous evaluation of "can do" or "can't do" does not allow a thorough analysis of student progress. (2) For those objectives for which a simple "can do, can't do" evaluation is desired, a grade of 3, 4, or 5 indicates "can do," while a grade of 0, 1, or 2 indicates "can't do." (3) The six-value evaluation scheme also allows for some statistical analysis to be run at the end of a unit or at the end of the year of instruction.

Because it is understood that some teachers wish to grade some objectives on a dichotomous evaluation, 0 is taken to mean "can't do" and is given a value of 0 in the file. An X is given the value of 3 to indicate that this objective has been met. So it would seem that a grading scheme of 0-5 would be satisfactory both as an easy application in the classroom of students' work and also as a reasonable method for putting information into files.

Description of the files. To put the objectives into workable segments, the classification of these objectives that the EMR project staff had developed was used. These are as follows:

Objective Set	Description
A	Applying for a job (pre-vocation skills).
B (girls)	Domestic tasks
BB (boys)	General vocational skills
D	Academic skills
E	Social skills
F	Citizenship
G	Personal
H	Family living

Description of the possible outputs of the information management system. There seem to be at least four types of reports that would be required or desired in the evaluation of any instructional system. The first report might be generated at the end of a particular time period, whether it be the end of instruction unit or six-week grading period, or the end of the school year. This report would contain the student numbers and each of the objectives with the pre-instructional evaluation score and the post-instructional evaluation score. This report can be used to judge the overall gain by each student and also evaluate the effectiveness of instruction.

The second report that might be requested is one indicating student deficiencies. This report would be generated by indicating the objectives that any one student has not met at the present time. This report might be generated near the end of a time period to indicate to the teacher in what area the student needs instruction so as to be able to

meet the criterion of each of the objectives.

The third type of report that the Information Management System can generate is one of indicating student gain. This report would indicate each of those objectives where the student's evaluation score was 0 at the pretest and at least 3 at the end of any instructional time period.

The fourth report would seem to aid in the placement of students by indicating those students who are proficient in any specific objectives that are deemed necessary by an employer. Samples of each of these reports are included in Appendix B.

How the Lake City EMR project staff can facilitate use of the computer-based Information Management System. The following are some suggestions that if followed will facilitate the use of the Information Management System. (1) Keep the objectives as specified at the beginning of the year for use throughout the year. (2) If a pre- and post-evaluation of the student is desired only, continue to use the 0 and X indication. (3) If a gradation of student performance is desired, use the 0-5 scale as indicated previously and use a different column on the evaluation form for each evaluation period. (4) Inform your evaluation consultants of any reports that you would like so that the report forms may be added to the Information Management System.

APPENDIX A

OBJECTIVE SETS

OBJECTIVE SET A

Applying for Job (prevocation skills)

Objective Number	Objective
A101	Can gather information needed to get job.
A102	Can fill out various job applications.
A103	Can role play job application effectively.
A104	Knows where employment agencies are located.
A106	Can use Want Ads for available jobs.
A107	Can follow step-by-step procedure for applying for job.
A108	Knows how agencies and counselors assist.
A109	Can dress properly for the job.
A110	Understands importance of being on time and regular.
A111	Displays grooming & health habits needed for job.
A112	Understands own limitations--strength/weakness.
A113	Understands jobs available for his limitations.
A114	Can list step-by-step goals to achieve before acquiring job.

OBJECTIVE SET BG1 (girls)

Domestic Tasks - Child Care

Objective Number	Objective
BG101	Can feed baby.
BG102	Can prepare the formula & sterilize bottles.
BG103	Knows proper foods for different ages.
BG104	Can bathe baby & older child.
BG105	Can pick up baby properly.
BG106	Can dress baby or child for the occasion.
BG107	Is aware of signs of discomfort in baby or child.
BG108	Can recognize signs of oncoming illness.
BG109	Can wash baby clothing properly & sanitize diapers.
BG110	Knows articles not safe as play things.
BG111	Can discipline child.
BG112	Can entertain child.

OBJECTIVE SET BG2 (girls)

Domestic Tasks - Household Cleaning

Objective Number	Objective
BG201	Can dust properly.
BG202	Can make beds properly.
BG203	Can operate vacuum cleaner.
BG204	Can operate electric scrubber--scrub, wax & polish.
BG205	Can operate electric shampooer--shampoo rugs.
BG206	Can mop floor effectively.
BG207	Can wax floor without electric waxer
BG208	Can clean toilets, sinks, and tub & showers properly
BG209	Can straighten & tidy rooms.
BG210	Can clean windows and screens.
BG211	Can clean kitchen appliances; including defrosting refrigerator.
BG212	Can use home dishwasher.

OBJECTIVE SET BG3

Domestic Tasks - Motel Maid

Objective Number	Objective
BG301	Can take orders on room assignments.
BG302	Can replenish supplies on maid's cart.
BG303	Takes supplies from cart to room properly.
BG304	Carries soiled linen and trash to cart.
BG305	Can strip and remake bed properly.
BG306	Can mop floors.
BG307	Can vacuum carpet and floors.
BG308	Dust rooms properly.
BG309	Replenish linen, soap, paper, etc.
BG310	Sets room thermostat to suit weather.
BG311	Leaves room in proper order.
BG312	Returns cart to linen room.

OBJECTIVE SET BG4

Domestic Tasks - Wardrobe Care

Objective Number	Objective
BG401	Sorts clothes carefully & properly for washing.
BG402	Pretreats laundry items in need of special care.
BG403	Can determine washing product: kind & amount needed.
BG404	Knows hand laundry treatment, detergent & rinse methods.
BG405	Knows washer actions, cycles & temp.; How to use machine.
BG406	Knows how to operate dryer, settings of temp. & time cycle.
BG407	Can fold, stack, sort, hand & place clothes in place.
BG408	Can iron clothes properly & read dial on iron.
BG409	Can use liquid starch & spray starch.
BG410	Can mend clothes with iron-on patches.
BG411	Can mend clothes by sewing.

OBJECTIVE SET BG5

Domestic Tasks - Food Preparation

Objective Number	Objective
BG501	Can use range properly and safely.
BG502	Can wash dishes properly.
BG503	Can set a table for various occasions.
BG504	Can make up menus.
BG505	Knows "basic 4" foods.
BG506	Knows how to store foods.
BG507	Can measure foods.
BG508	Can read recipe.
BG509	Can cook simple foods--breakfasts.
BG510	Can cook simple foods--lunches.
BG511	Can cook simple foods--suppers (formal/informal)
BG512	Can list orally kitchen safety rules.

OBJECTIVE SET BG6

Domestic Tasks - Care of the Invalid and Infirm

Objective Number	Objective
BG601	Can clean sickroom
BG602	Can sanitize sickroom.
BG603	Can make up unoccupied bed.
BG604	Can make up bed with patient in it.
BG605	Can prepare food tray and feed patient.
BG606	Can empty waste basket and sanitize.
BG607	Can bathe patient.
BG608	Can make conveniences--tray, backrest, etc.
BG609	Can give medicine safely and follow Dr.'s directions.
BG610	Can assist in feeding patient.
BG611	Can take pulse.
BG612	Can take temperature (oral & rectal).

OBJECTIVE SET BB1 (Boys)

Service Station Attendant

Objective Number	Objective
BB101	Can pump gas.
BB102	Can check under hood.
BB103	Can clean windows and vacuum interior.
BB104	Can operate cash register and count money.
BB105	Can write credit receipt.
BB106	Can identify use and care for tools.
BB107	Can assist in lubrication and safety check.
BB108	Can wash car and clean interior.
BB109	Can wax and polish car.
BB110	Can change and repair tires.
BB111	Can perform custodial skills.
BB112	Can trouble shoot power supply, lights, and flasher lights.
BB113	Can replace muffler.
BB114	Can balance tires.
BB115	Can operate battery charger.
BB116	Can check and maintain air compresser.

OBJEVTIVE SET BB2

Mechanics Assistant-Small Engine Maintenance

Objective Number	Objective
BB201	Can identify, use and care for tools.
BB202	Can use tool storage procedures.
BB203	Understands theory of internal combustion.
BB204	Can test, clean, charge, replace, repair storage battery.
BB205	Can clean and recharge magnet.
BB206	Can repair or replace distributor components.
BB207	Can test, repair or replace coils.
BB208	Can use shop manual.
BB209	Can clear & adjust carburetor.
BB210	Can repair & replace fuel pump, gas line, gas tank.
BB211	Can clean, change oil & replace air filter & fuel filter.
BB212	Can determine type of bearing and its condition.
BB213	Can determine when & how to replace oil pumps.
BB214	Can repair governor linkage & governor, replace if needed.
BB215	Can determine if part can be repaired or needs replacing.
BB216	Can clean & adjust ignition points.
BB217	Can test spark plug & magneto output.
BB218	Can adjust ignition timing.
BB219	Can check compression.
BB220	Can prepare mower for storage.
BB221	Can prepare mower for use.
BB222	Can repair deck, wheels, & Blade.
BB223	Can refinish mower.

OBJECTIVE SET BB3

Landscape Maintenance and Commercial

Nursery Helper

Objective Number	Objective
BB301	Can use hand & power tools safely.
BB302	Can care for hand & power tools properly.
BB303	Can mow lawn and meet acceptable standard.
BB304	Can cultivate properly.
BB305	Can fertilize properly.
BB306	Can irrigate properly.
BB307	Can prune properly.
BB308	Can use sprayer & Duster
BB309	Can identify common shrub and trees.
BB310	Can prepare land for planting.
BB311	Can handle plants in cans and burlap.
BB312	Can identify common annual plants.
BB313	Can plant seeds properly.
BB314	Can transplant plants properly.
BB315	Can propogate ornamental plants.

OBJECTIVE SET BB4

Custodial Work and Building Maintenance

Objective Number	Objective
BB401	Can sweap and vacuum floors.
BB402	Can clean and sanitize rest rooms.
BB403	Can replenish laboratory supplies.
BB404	Can clean and wax floors.
BB405	Can care for grounds.
BB406	Can hang drapes and curtains.
BB407	Can identify, use and care for hand tools.
BB408	Can use measuring tools.
BB409	Can use various types of fasterings.
BB410	Can make simple joints.
BB411	Can use simple power tools.
BB412	Can perform simple frame construction.
BB413	Can install window glass.
BB414	Can paint walls.
BB415	Can finish trim.
BB416	Can finish furniture and other items.
BB417	Can patch a block wall.
BB418	Can repair broken concrete.
BB419	Can identify general electrical supplies.
BB420	Can restore service after overload.
BB421	Can replace bulbs.
BB422	Can maintain valves & faucets.
BB423	Can clean drains trap.

OBJECTIVE SET D1

Academic Skills

Communication Skills

Objective Number	Objective
D101	Can converse acceptably.
D102	Can answer phone properly--give and take messages
D103	Can make long distance phone call.
D104	Can order by phone.
D105	Can write legibly in cursive writing.
D106	Has usable written vocabulary.
D107	Knows how to write business letter.
D108	Knows how to order by mail.
D109	Writes good simple sentence with proper punctuation.
D110	Listens to and follows directions.
D111	Is curteous listener.

OBJECTIVE SET D2

Academic Skills Reading Skills

Objective Number	Objective
D201	Knows and reads letters of alphabet.
D202	Recognized beginning sounds and blends.
D203	Recognizes short and long vowels.
D204	Makes reasonable attempt to sound out words.
D205	Can use dictionary and phone book.
D206	Can read and understand simple reference material.
D207	Can make out pertinent information on bills and statements.
D208	Reads cursive writing and printed material.
D209	Can use map of city of state effectively.
D210	Shows interest in reading for pleasure.
D211	Approximate reading level.

OBJECTIVE SET D3

Academic Skills--Numberical Skills

Objective Number	Objective
D301	Can write and count by 1's, 2's, 5's, and 10's.
D302	Can use fractions necessary for vocations.
D303	Can add and subtract whole numbers effectively for employment.
D304	Can multiply and divide whole nos. effectively for employment.
D305	Can tell time to minute and set clock.
D306	Makes and counts own change.
D307	Can work problems involving money.
D308	Can read ordinary scales and use thermometers and gauges.
D309	Can measure with ruler, yardstick, tapemeasure.
D310	Understands distance in mileage.
D311	Understands how time, work, and wages are related.
D312	Can read and interpret calendar.

OBJECTIVE SET E

Social Skills

Objective Number	Objective
E101	Cooperates with EMR classmates.
E102	Cooperates with regular classmates.
E103	Mixes with regular students. (Talks with outsiders.)
E104	Participates in school activities: 1. School projects
E105	" " " " 2. Homeroom Activities (school spirit)
E106	" " " " 3. Attends special volunteer activities during school time.
E107	" " " " 4. Participates in after school activ. bank, chorus, intramurals, others
E108	Shows acceptable behavior on trips.
E109	Behaves properly for master craftsmen.
E110	Behaves properly at program social dinners.

OBJECTIVE SET F - CITIZENSHIP

BANKING AND INSURANCE

Objective Number	Objective
F101	Understands bank functions & knows locations of local banks.
F102	Knows reason for saving and how to open savings account.
F103	Can fill out signature card and open checking account.
F104	Can write and endorse checks.
F105	Can complete check stub and keep balance.
F106	Can fill out deposit slip for checking & savings account.
F107	Understands how loans work & how to get one.
F108	Knows various kinds of insurance & companies.
F109	Knows various types of insurance policies & benefits offered.
F110	Knows purpose of insurance & who can be insured.
F111	Knows common items that can be insured.
F112	Knows when to buy insurance & amount needed.

OBJECTIVE SET F2

Citizenship General

Objective Number	Objective
F201	Knows function of police dept. & how to get help.
F202	Knows function of fire dept. & how to get help.
F203	Knows where city and county courthouses are.
F204	Knows locations of hospitals, emergency rooms & how to call an ambulance.
F205	Knows where & when to register with draft board.
F206	Can pledge the flag and display the flag.
F207	Knows significance of major holidays.
F208	Can participate in patriotic services.
F209	Knows basic structure of city, state, and federal governments.
F210	Knows where, when, & how to get help & advice of legal or social nature.
F211	Knows where County Health unit is & their services rendered.
F212	Understands & participates in student government.

OBJECTIVE SET F3

Citizenship Voting, Taxes, and Social Security

Objective Number	Objective
F301	Knows democratic progresses-party systems.
F302	Knows where to register to vote.
F303	Knows where own precinct is located.
F304	Can work voting machine.
F305	Understands reasons for taxes.
F306	Can tell types of taxes local, state federal.
F307	Can fill out W-2 forms.
F308	Can fill out Income tax form or supply info. for one who can.
F309	Can fill in form for Social Security benefits.
F310	Understands some jobs have different retirement benefits.

OBJECTIVE SET G1

Personal Health & Grooming

Objective Number	Objective
G101	Is usually bathed and clean.
G102	Uses deodorants & perfumes properly.
G103	Acceptable dress & appearance (clean clothes & neat)
G104	Hair care & styling (clean & properly combed)
G105	Proper dental care. Clean teeth, no cavities.
G106	Proper use of cosmetics (girls).
G107	Shoes shined & cleaned.
G108	Adequate diet - as demonstrated by appearance & behavior.
G109	Proper rest habits - evidenced by behavior & appearance.

OBJECTIVE SET G2

Personal Leisure time Activities

Objective Number	Objective
G201	Knows where library, city pool, tennis courts & teenage dances are.
G202	Attends public dances, concerts, plays or sporting events.
G203	Knows about hobbies & clubs they can join in community.
G204	Has driver's license.
G205	Pursues one or more sports as a personal leisure-time activity.
G206	Shows how to swim (means took training in summer program)
G207	Shows interest & ability in dancing in class socials.
G208	Can play Crazy 8's.
G209	Can play checkers.
G210	Can play Scrabble using elementary dictionaries.
G211	Can play Ping Pong - Knows the rules.
G212	Knows enough about one school sport to be good spectator.

OBJECTIVE SET G3

Personal Swimming Skills

Objective Number	Objective
G301	Breath holding - 10 seconds.
G302	Rhythmic breathing - 10 times.
G303	Prone float.
G304	Prone glide - 10 feet.
G305	Back float.
G306	Back glide - 6 feet.
G307	Prone glide with kick - 20 feet.
G308	Back glide with kick - 20 feet.
G309	Arm stroke - 20 feet.
G310	Finning or sculling - 20 feet.
G311	Crawl stroke - 20 yards.
G312	Combines stroke (back) - 10 yards.
G313	Change directions.
G314	Turning over.
G315	Leveling off.
G316	Jump (chest deep water).
G317	Jump (deep water).
G318	Front dive.
G319	Knows safety skills.
G320	Has ARC Beginner Card.

OBJECTIVE SET H1

Cooking (Boys)

Objective Number	Objective
H101	Can operate electric range.
H102	Can operate electric grill.
H103	Can prepare a balanced breadfast.
H104	Can prepare a balanced lunch or dinner.
H105	Can shop for groceries and vegetables.
H106	Can use common kitchen utensils.
H107	Can prepare nutritious snacks.

OBJECTIVE SET H2

Repairing Household Appliances

Objective Number	Objective
H201	Knows safe practices in using electricity.
H202	Can replace worn appliance plug.
H203	Can change fuse that has blown.
H204	Can turn on electricity when circuit breaker has tripped off.
H205	Can check for trouble when lights go out.
H206	Can read electric meter.
H207	Can repair electric cord.
H208	Understands proper care of water pipes & drains.
H209	Can repair faucets replace washers.

OBJECTIVE SET H3

Family Living - Consumer Education

Objective Number	Objective
H301	Can plan adequate budget.
H302	Can purchase on installment credit, lay-away, etc.
H303	Knows meaning of consumer purchasing related to budget.
H304	Can shop for quality as well as quantity.
H305	Knows advantage & disadvantage of cash, installment & loan buying.
H306	Can discuss advantage of buying at certain time of year.
H307	Can state advantage & disadvantage of bank & charge accounts.
H308	Knows that good shopping habits contribute to good money management.
H309	Can state function of bank account & credit account.
H310	Can write a check properly.

APPENDIX B

SAMPLE REPORTS

A SAMPLE SESSION RETRIEVING DATA

```
/ATTACH,NEWDOE .
/MARS.
1KRONOS MARS VI V2.0 - FLORIDA STATE UNIVERSITY
←? ATTACH;
 PFN=
? LKCOE;
? CONTROL;
  FILE    ACTION   CT MODE   PWORD   STATUS
← LKCOE1   ATTACH   P    W     NONE     COMPLETE.
 LKCOE2   ATTACH   P    W     NONE     COMPLETE.
← LKCOE3   ATTACH   P    W     NONE     COMPLETE.
 LKCOE4   ATTACH   P    W     NONE     COMPLETE.
 LKCOE5   ATTACH   P    W     NONE     COMPLETE.
 LKCOE6   ATTACH   P    W     NONE     COMPLETE.
 LKCOE7   ATTACH   P    W     NONE     COMPLETE.
 LKCOE8   ATTACH   P    W     NONE     COMPLETE.
← ENTER SYSTEM COMMAND
? RETRIEVAL;
? REPORT NAMES;
1
←
←
 NAMES
←
  007B
  009B
  013B
  017B
  022B
←  029B
  033B
  021B
```

```
←? IF E10101 EQ 0 REPORT NAMES;
1

 NAMES
←

  007B
  017B
  033B
0
← --- END OF RETRIEVAL ---
```

SAMPLE REPORT #1

```
? RETRIEVAL;
? REPORT NAMES,E10101,E10105;
1

 NAMES     E10101     E10105

 007B        0          3
 009B        3          3
 013B        3          3
 017B        0          0
 022B        3          3
 029B        3          3
 033B        0          3
 021B        3          3
0
 --- END OF RETRIEVAL ---
? REPORT NAMES,E10201,E10205;
1

 NAMES     E10201     E10205

 007B        0          3
 009B        3          3
 013B        0          3
 017B        0          3
 022B        3          3
 029B        3          3
 033B        3          3
 021B        3          3
0
 --- END OF RETRIEVAL ---
? REPORT NAMES,E10301,E10305;
1

 NAMES     E10301     E10305

 007B        3          3
 009B        3          3
 013B        3          3
 017B        3          3
 022B        3          3
 029B        3          3
 033B        3          3
 021B        3          3
0
 --- END OF RETRIEVAL ---
? REPORT NAMES,E10401,E10405;
1

 NAMES     E10401     E10405

 007B        0          0
 009B        3          3
 013B        0          3
 017B        0          3
 022B        0          3
 029B        0          3
 033B        0          3
 021B        0          3
0
 --- END OF RETRIEVAL ---
? REPORT NAMES,E10501,E10505;
1

 NAMES     E10501     E10505

 007B        0          0
 009B        3          3
 013B        0          0
 017B        0          0
 022B        0          3
 029B        0          3
 033B        0          3
 021B        3          3
0
 --- END OF RETRIEVAL ---
? REPORT NAMES,E10601,E10605;
1

 NAMES     E10601     E10605

 007B        0          0
 009B        3
 013B        0
 017B        0
 022B        0
 029B        0
 033B        0
 021B        0
10
 --- END OF RETRIEVAL ---
```

```
? REPORT NAMES,E10701,E10705;
1

 NAMES      E10701      E10705

  007B                      0
  009B       3              3
  013B       0              0
  017B       0              0
  022B       0              0
  029B       0              0
  033B       0              0
  021B       0              0
←0
 --- END OF RETRIEVAL ---
←? REPORT NAMES,E10801,E10805;
1

 NAMES      E10801      E10805

  007B       0
←  009B      3              3
1  013B      3              3
←  017B      0              0
←  022B      0              0
  029B     0                3
  033B     0                3
  021B     3                3
0
 --- END OF RETRIEVAL ---
?
```

SAMPLE REPORT #2

```
? PRINT E10101,E10105 WHERE NAMES EQ 007B;
 E10101=0
 E10105=3

 --- END OF RETRIEVAL ---
? PRINT E10101,E10201,E10301,E10401(E10501,E10601,E10701,E10801
? WHERE NAMES EQ 007B;
 E10101=0
 E10201=0
 E10301=3
 E10401=0
 E10501=0
 E10601=0
 E10701=
 E10801=0

 --- END OF RETRIEVAL ---
? PRINT E100-105,E10205,E10305,E10405,E10605(E10705,E10805 WHERE
? -------,E10505 WHERE NAMES EQ 007B;
 ,E10505 WH IS NOT A DEFINED COMPONENT. NO ACTION POSSIBLE.
 IF CLAUSE GOOD. WHERE OR PRINT CLAUSE BAD.
?
  PRINT E10101-5,E10205,E10305,E10405,E10505,E10605,E10705,E10805,-
? WHERE NAMES EQ 007B;
 E10105=3
 E10205=3
 E10305=3
 E10405=0
 E10505=0
 E10605=0
 E10705=0
 E10805=

 --- END OF RETRIEVAL ---
? EXIT;
EXIT
/BYE

G604002  LOG OFF.  20.47.52.
 3504002   CP      15.730 SEC.
```

SAMPLE REPORT #3

```
? RETRIEVAL;
? IF (E10101 EQ 0 AND E10105 GT 2) AND---OR (E10201 EQ 0 AND E10205
? GT 2) OR (E10301 EQ 0 AND E10305 GT 2) REPORT NAMES, E10101,
? E10105,E10201,E10205,E10301,E10305;
1
--

 NAMES    E10101    E10105    E10201    E10205    E10301    E10305
--

  007B     0         3         0         3         3         3
-  013B     3         3         0         3         3         3
-  017B     0         0         0         3         3         3
  033B     0         3         3         3         3         3
0
```

```
? IF (E10401 EQ 0 AND E10405 GT 2) OR (E10501 EQ 0 AND E10505 GT 2)
? OR (E10601 EQ 0 AND E10605 GT 2) REPORT NAMES, E10401,E10405,
? E10501,E10505,E10601,E10605 BY HIGH NAMES;
1

 NAMES    E10401    E10405    E10501    E10505    E10601    E10605
-

  013B     0         3         0         0         0
  017B     0         3         0         0         0
-  021B     0         3         3         3         0
-  022B     0         3         0         3         0
  029B     0         3         0         3         0
  033B     0         3         0         3         0
-0
 --- END OF RETRIEVAL ---
```

```
? IF (E10701 EQ 0 AND E10705 GT 2) OR (E10801 EQ 0 AND E10805 GT 2)
?  REPORT NAMES,E10701,E10705,E10801,E10805 BY HIGH NAMES;
1
-

 NAMES    E10701    E10705    E10801    E10805
-

  022B     0         0         0         3
  029B     0         0         0         3
  033B     0         0         0         3
-0
 --- END OF RETRIEVAL ---
```

SAMPLE REPORT # 4

```
? REPORT NAMES, E10805;
1

 NAMES    E10805

1

 007B
 009B    3
 013B    3
1 017B    0
 022B    3
 029B    3
 033B    3
 021B    3
0
--- END OF RETRIEVAL ---
```

```
? IF E10705 GT 2 AND E10805 GT 2 AND E10605 GT 2 REPORT NAMES BY HIGH
?  NAMES;
IF CLAUSE FAILED.
```

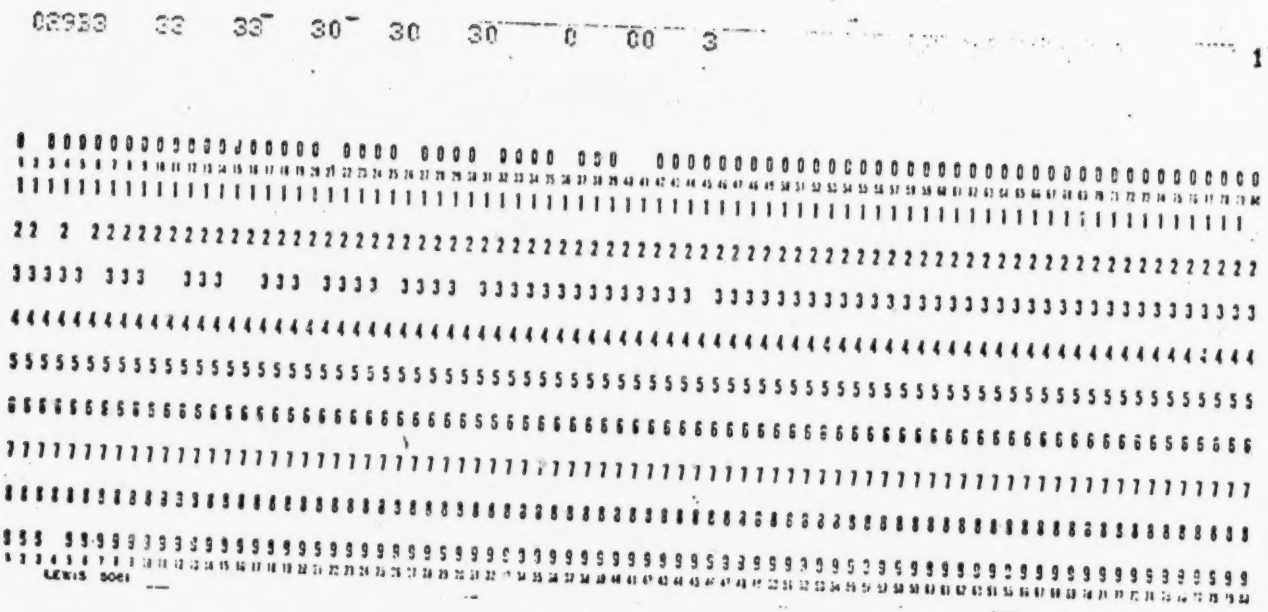
```
? IF E10705 GT 2 REPORT NAMES BY HIGH NAMES;

 NAMES

1 009B
0
 --- END OF RETRIEVAL ---
? RETRIEVAL;
? IF E10805 GT 2 REPORT NAMES BY HIGH NAMES;
1

 NAMES

 009B
 013B
 021B
 022B
 029B
 033B
0
 --- END OF RETRIEVAL ---
```

```
? RETRIEVAL;
? IF E10605 GT 2 REPORT NAMES BY HIGH NAMES;

* IF CLAUSE FAILED.


? IF NAMES GT 0 REPORT NAMES, E10101,E1020----------E10105,E10205;
1

 NAMES     E10105     E10205

  007B      3          3
  009B      3          3
  013B      3          3
  017B      0          3
  022B      3          3
  029B      3          3
  033B      3          3
  021B      3          3
0
--- END OF RETRIEVAL ---
```

```
? RETRIEVAL;
? IF E10101 E0-Q 0 OR E10201 EQ 0 PRINT NAMES;
 NAMES= 007B

 NAMES= 013B

 NAMES= 017B

 NAMES= 033B

--- END OF RETRIEVAL ---
? IF E10805 EQ 0 PRINT NAMES;
 NAMES= 017B

--- END OF RETRIEVAL ---
? IF E10805 E-GT 2 PRINT NAMES;
 NAMES= 009B

 NAMES= 013B

 NAMES= 022B

 NAMES= 029B

 NAMES= 033B

 NAMES= 021B

--- END OF RETRIEVAL ---
? REPORT NAMES;


 NAMES

 007B
 009B
 013B
 017B
 022B
 029B
 033B
 021B

--- END OF RETRIEVAL ---
```

PROGRAM LISTINGS

SAMPLE DATA CARD



```
                      PROGRAM LDLK(INPUT,OUTPUT,TAPE5=INPUT,TAPE6)
000003                DIMENSION IBUF(8,7),A(8,7)
000003                READ(5,5) JCARD
000011              5 FORMAT(I2)
000011              1 DO 10 K=1,JCARD
000013                READ(5,2)(A(I,K),I=1,8)
000025              2 FORMAT(3A10)
000025                IF (EOF,5) 7,10
000030             10 CONTINUE
000033                DO 21 J=1,JCARD
000034                DO 20 I=1,8
000035                ENCODE (10,30,IBUF(I,J)) A(I,J)
000047             20 CONTINUE
000051             21 CONTINUE
000054             30 FORMAT (A10)
000054                BUFFER OUT (6,0)(IBUF,IBUF(8,JCARD))
000062             13 IF (UNIT,6) 13,16
000065             16 DO 40 I=1,JCARD
000067             40 PRINT 41,(IBUF(K,JCARD),K=1,8)
000104             41 FORMAT(1H ,8A10)
000104                GO TO 1
000104              7 STOP
000106                END
```

```
        EBUFAIM.    72/02/16.FSU KRONOS TIME SHARING SYSTEM VER2.0/6

12.25.32.EBUFI,T10,CM65000.3504,TOWLE
12.25.32.ACCOUNT,3504002.
12.25.32.DEFINE(TAPE6=DATAOE/CT=L,M=R)
12.25.35.RUN23(S)
12.25.36.LGO.
12.25.38.STOP
12.25.39.CP          0.507 SEC.
12.25.39.CM          0.003 KWH.
12.25.39.MS          0.094 KPR.
12.27.00.LP          0.094 KLN.
```

FILE E

```
KRONOS MARS VI V2.0 - FLORIDA STATE UNIVERSITY
DEFINE:
NEW DATA BASE IS LARGE;
1) NAMES(NAME):
MAP;
DEFINE SUBITEMS:
RECORD ID IS LARGE;
COL 1-5,C1,NAMES.ALPHA,KEY:
COL 006, E10101.   ALPHA;
COL 007, E10102.   ALPHA;
COL 008, E10103.   ALPHA;
COL 009, E10104.   ALPHA;
COL 010, E10105.   ALPHA;
COL 011, E10201.   ALPHA;
COL 012, E10202.   ALPHA;
COL 013, E10203.   ALPHA;
COL 014, E10204.   ALPHA;
COL 015, E10205.   ALPHA;
COL 016, E10301.   ALPHA;
COL 017, E10302.   ALPHA;
COL 018, E10303.   ALPHA;
COL 019, E10304.   ALPHA;
COL 020, E10305.   ALPHA;
COL 021, E10401.   ALPHA;
COL 022, E10402.   ALPHA;
COL 023, E10403.   ALPHA;
COL 024, E10404.   ALPHA;
COL 025, E10405.   ALPHA;
COL 026, E10501.   ALPHA;
COL 027, E10502.   ALPHA;
COL 028, E10503.   ALPHA;
COL 029, E10504.   ALPHA;
COL 030, E10505.   ALPHA;
COL 031, E10601.   ALPHA;
COL 032, E10602.   ALPHA;
COL 033, E10603.   ALPHA;
COL 034, E10604.   ALPHA;
COL 035, E10605.   ALPHA;
COL 036, E10701.   ALPHA;
COL 037, E10702.   ALPHA;
COL 038, E10703.   ALPHA;
COL 039, E10704.   ALPHA;
COL 040, E10705.   ALPHA;
COL 041, E10801.   ALPHA;
COL 042, E10802.   ALPHA;
COL 043, E10803.   ALPHA;
COL 044, E10804.   ALPHA;
COL 045, E10805.   ALPHA;
COL 046, E10901.   ALPHA;
COL 047, E10902.   ALPHA;
COL 048, E10903.   ALPHA;
COL 049, E10904.   ALPHA;
COL 050, E10905.   ALPHA;
COL 051, E11001.   ALPHA;
COL 052, E11002.   ALPHA;
COL 053, E11003.   ALPHA;
COL 054, E11004.   ALPHA;
COL 055, E11005.   ALPHA;
COL 056, FILL01.   ALPHA;
COL 057, FILL02.   ALPHA;
COL 058, FILL03.   ALPHA;
COL 059, FILL04.   ALPHA;
```

```
COL 062, FILL07.   ALPHA;
COL 063, FILL08.   ALPHA;
COL 064, FILL09.   ALPHA;
COL 065, FILL10.   ALPHA;
COL 066, FILL11.   ALPHA;
COL 067, FILL12.   ALPHA;
COL 068, FILL13.   ALPHA;
COL 069, FILL14.   ALPHA;
COL 070, FILL15.   ALPHA;
COL 071, FILL16.   ALPHA;
COL 072, FILL17.   ALPHA;
COL 073, FILL18.   ALPHA;
COL 074, FILL19.   ALPHA;
COL 075, FILL20.   ALPHA;
COL 076, FILL21.   ALPHA;
COL 077, FILL22.   ALPHA;
COL 078, FILL23.   ALPHA;
COL 079, FILL24.   ALPHA;
COL 80, CARD1 .    ALPHA;
```

CUSTODIAL WORK AND BUILDING MAINTENANCE

SCALE VALUE	DEFINITION
4	Can do the complete task quickly and accurately. Can tell or show others how to do the task. HIGHLY PROFICIENT
3	Can do all parts of the task. Needs only a spot check of completed work. Meets minimum local demands for speed and accuracy. COMPETENT
2	Can do most parts of the task. Needs help only on hardest parts. May not meet local demands for speed or accuracy. PARTIALLY PROFICIENT
1	Can do simple parts of the task. Needs to be told or shown how to do most of the task. EXTREMELY LIMITED
NP	Student has not performed task in current assignment.
NR	Task not required in specific assignment.

	NR	NP	1	2	3
1. Can perform cleaning skills					
a. Can sweep and vacuum floors					
b. Can dust properly					
c. Can clean and sanitize rest rooms					
d. Can clean and wax floors					
e. Can clean windows.					
2. Can care for outside of building					
a. Can accept responsibility for trash control.					
b. Can mow and edge lawn.					
c. Can prune shrubs.					
d. Can fertilize lawn and shrubs.					
e. Can irrigate lawn and shrubs.					
3. Can perform routine tasks.					
a. Can replenish lavatory supp.					
b. Can monitor boiler.					
c. Can move furniture, boxes, etc.					
d. Can sort and shelve supplies.					
e. Can raise, lower, and fold flag.					
f. Can read and set thermostat					
g. Can maintain beating system.					
h. Can check for fire, leakage, other irregularities.					
i. Can hang drapes, curtains.					
4. Can perform carpentry skills.					
a. Can identify, use and care for hand tools.					
b. Can use measuring tools.					

SCALE VALUE	DEFINITION	
4	Can do the complete task quickly and accurately. Can tell or show others how to do the task.	HIGHLY PROFICIENT
3	Can do all parts of the task. Needs only a spot check of completed work. Meets minimum local demands for speed and accuracy.	
2	Can do most parts of the task. Needs help only on hardest parts. May not meet local demands for speed or accuracy.	COMPETENT
1	Can do simple parts of the task. Needs to be told or shown how to do most of the task.	PARTIALLY PROFICIENT
NP	Student has not performed task in current assignment.	EXTREMELY LIMITED
NR	Task not required in specific assignment.	

	NR	NP	1	2	3	4
c. Can select and square stock						
d. Can use various types of fastenings						
e. Can use glues						
f. Can make simple joints.						
g. Can use simple power tools.						
h. Can perform skills of interior and exterior trim.						
i. Can perform simple frame construction						
j. Can install window glass.						
5. Can perform painting skills.						
a. Can paint inside wall.						
b. Can paint outside wall.						
c. Can finish trim.						
d. Can finish flooring.						
e. Can finish furniture and other items.						
6. Can perform block and concrete skills.						
a. Can patch a block wall.						
b. Can repair broken concrete.						
7. Can perform electrical skills.						
a. Can understand basic fundamentals of electricity.						
b. Can explain and use safety measures.						
c. Can idneitfy, use and care for tools.						
d. Can identify basic wire types.						
e. Can identify general electric supp.						
f. Can use simple testing methods.						
g. Can restore service after overload.						
h. Can replace bulbs.						
i. Can repair lamps and small appliances.						

SCALE VALUE	DEFINITION	
4	Can do the complete task quickly and accurately. Can tell or show others how to do the task.	HIGHLY PROFICIENT
3	Can do all parts of the task. Needs only a spot check of completed work. Meets minimum local demands for speed and accuracy.	COMPETENT
2	Can do most parts of the task. Needs help only on hardest parts. May not meet local demands for speed or accuracy.	PARTIALLY PROFICIENT
1	Can do simple parts of the task. Needs to be told or shown how to do most of the task.	EXTREMELY LIMITED
NP	Student has not performed task in current assignment.	
NR	Task not required in specific assignment.	

NR	NP	1	2	3	4

8. Can perform plumbing skills.

   a. Can maintain valves and faucets.
   b. Can clean drains and trap.
   c. Can replace fixtures.

MECHANIC'S ASSISTANT

SCALE VALUE	DEFINITION
4	Can do the complete task quickly and accurately. Can tell or show others how to do the task.
3	Can do all parts of the task. Needs only a spot check of completed work. Meets minimum local demands for speed and accuracy.
2	Can do most parts of the task. Needs help only on hardest parts. May not meet local demands for speed or accuracy.
1	Can do simple parts of the task. Needs to be told or shown how to do most of the task.
NP	Student has not performed task in current assignment.
NR	Task not required in specific assignment.

HIGHLY PROFICIENT

COMPETENT

PARTIALLY PROFICIENT

EXTREMELY LIMITED

	NR	NP	1	2	3	4
1. Can perform tool use procedures.						
a. Can identify, use and care for tools.						
b. Can use tool room and storage procedures.						
2. Can understand theory of internal combusion,						
3. Can test, clean and repair ignition system.						
a. Can test, clean, charge, replace, repair storage battery.						
b. Can clean and recharge magnets.						
c. Can reprit or replace distributor components.						
d. Can test, repair or replace coils.						
4. Can analyze & test, adjust, clean repair, refuel syst. components.						
a. Can use shop manual.						
b. Can analyze & test fuel syst. to determine malfunctions.						
c. Can clean & adjust carburetor.						
d. Can clean gas tanks & lines.						
e. Can repair & replace fuel pump, gas lines, gas tanks.						
f. Can clean, change oil & replace air filter & fuel filter.						
g. Can explain & use safety procedures.						
5. Can determine condition of miscellaneous engine parts - repair, or replace as needed.						
a. Can recognize & determine type of bearing and its conditions- replace as needed.						
b. Can determine when and how to repair and replace oil pumps.						
c. Can understand governor oper.						
d. Can repair governor linkage & governor, replace if needed.						

SCALE VALUE	DEFINITION	
4	Can do the complete task quickly and accurately. Can tell or show others how to do the task.	HIGHLY PROFICIENT
3	Can do all parts of the task. Needs only a spot check of completed work. Meets minimum local demands for speed and accuracy.	COMPETENT
2	Can do most parts of the task. Needs help only on hardest parts. May not meet local demands for speed or accuracy.	PARTIALLY PROFICIENT
1	Can do simple parts of the task. Needs to be told or shown how to do most of the task.	EXTREMELY LIMITED
NP	Student has not performed task in current assignment.	
NR	Task not required in specific assignment.	

NR	NP	1	2	3

6. Can identify & make practical use of a knowledge of basic engine parts.

   a. Can identify, use nomencla-ture & understand purpose of parts.
   b. Can recognize & determine if a part can be repaired or if it needs to be replaced.

7. Can perform tune-up.

   a. Can clean & adjust ignition point.
   b. Can test spark plug and magnets output.
   c. Can adjust ignition timing.
   d. Can check compressor.

8. Can service lawn mowers.

   a. Can prepare for storage.
   b. Can preserve lawn mower for use.
   c. Can repair deck wheels blade.
   d. Can refinish.